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ABSTRACT

This study reports the results of a questionnaire mailed to 700 teachers probing uses of computer software in Maine special education programs. Findings based on a 54 percent response (N=381) indicate no significant differences in educational level, previous training, gender, years of experience, or age between computer users and non-users. Impediments to using computers and activities helpful in using computers were also analyzed. There was very little use of computers in areas other than reading and mathematics, and students were not found to regularly use available computers to work on instructional activities. Computers were generally used in special classrooms and resource rooms, rather than being integrated into regular classroom activities. Many students requiring unavailable interface equipment aside from the standard keyboard were unable to use computers. Appendices contain the questionnaire and a list of teacher-preferred software in several curriculum areas. Includes 18 references. (PB)

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Integrating Software into the Curriculum: A Statewide Study

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Integrating Software into the Curriculum: A Statewide Study

Libby G. Cohen and Loraine Spenciner

> Technology romances us, and people with visions of a greatly improved educational system are drawn to the possibilities. We are hopeful, as we try to entice educators into using technology to educate children differently--more interactively, with more attention to cognitive differences and our nation's problems of eductional equity. But we are constantly drawn back to the research and the reality of experience, which shows us that educational change is far more complex (LaFrenz & Friedman, 1989, p. 224).

Within the last 10 years, American public schools have acquired almost 2 million computers and nearly all schools have one or more computers (Power on! New tools for teaching and learning, 1988). Much has been written about the advantages of computer software as an instructional material for use with students with special needs. The special capabilities that software offers including speech animation as well as sophisticated branching routines appear to hold much promise for children with special needs. In addition, more and more software may be tailored to particular students by teacher options within the program itself. Yet, does this new teacher resource remain untapped by the special educator?

The potential benefits of using a microcomputer in the special education setting have been described by many authors (Conners, Caruso, & Detterman, 1986; Hofmeister,

1982, 1984; Hanley, 1984; Nolan & Ryba, 1984). Typically, these materials are used only for activities to reinforce direct instruction by the teacher. In fact, much of the early software consisted of nothing more than an electronic workbook and did not begin to take advantage of the additional capabilities that computers offer over traditional materials.

A number of educators (Bok, 1984; Kulik, 1984; Russell, 1986; Walker, 1983) have summarized the the advantages of using computers. These advantages include: more active learning; more independent learning; branching of the program to include a prompt or hint when an incorrect response is made; using the materials outside the regularly scheduled time; including still graphics or animation, sound, or synthesized speech; moving as rapidly or as slowly through the materials as the learner wishes; learning closer to the speed of thought; and, ease of record keeping. It should be noted that several of these advantages are simply good principles of optimal learning (Brown & Perlmutter, 1971; Denny, 1966; Sidman, 1971; Snell, 1983).

Despite these advantages, a recent study by Paulson and Anderson (1987) indicated that many students work on the computer primarily as a reinforcement activity and that there is little direct student-teacher contact time during

the computer session (Cosden, Gerber, Semmel, Goldman, & Semmel, 1987). A study of microcomputer usage by secondary special educators (Okolo, Rieth, & Behr, 1989) showed that the implementation and use of microcomputers is a complex process. The authors found that although the special education teachers "had a number of available resources, microcomputer use was neither widespread nor integral to special education programming" (Okolo, Rieth, & Biehr, 1989, p. 116). In addition, these authors wrote that "this research suggests that special education students may be receiving more limited microcomputer experiences than their nonhandicapped peers" (Okolo, Rieth, & Biehr, 1989, p. 116).

In Maine, the use of computers by students who have taken the Maine Educational Assessment Test, which is administered to students in grades 4, 8, and 11, has been examined (Kunces, 1989). When teachers and principals were asked whether the computer was integrated into science, social studies, mathematics, or language arts curricula, the respondents reported that this occurred less than 50% of the time. Although the use of computers by students in grades 4, 8, and 11 in Maine has been examined, there have been no studies which have focused on how special education students and their teachers use computers. The study reported here investigated the following questions:

1. In what curriculum areas are special education teachers using computer software?
2. How do special education teachers use (e.g., teacher directed, reward, practice, tutorial, etc.) computers in curriculum areas?
3. How do students with special needs use computers (e.g., independently, one-on-one, small group, with peers)?
4. Where do students with special needs use computers (e.g., special classroom, resource room, lab setting, library, regular classroom)?
5. How ofen do students with special needs use computers (e.g., daily, 3-4 times per week, less often)?
6. What curricular materials and peripheral equipment do special education teachers use?

Method

Subjects

Seven hundred (700) elementary and secondary level special educators were mailed a questionnaire. The teachers were randomly selected from the list of special educators compiled by the Maine Department of Educational and Cultural Services. The list was current as of December, 1988. In order to obtain sufficient power when analyzing data, the book, Statistical Power Analysis for the Behavioral Sciences (Cohen, 1988) was consulted to determine an adequate sample size. After conducting a follow-up mailing, the total number of questionnaires that were returned was 406 or 58%. Three hundred and eighty-one (381) or 54.4% of the questionnaires were useable. The remaining 25 questionnares were incomplete.

Instrument

A questionnaire (Appendix 1) was developed to investigate the research questions. Before being put into final form, a draft of the questionnaire was reviewed by experts and was pilot tested.

The questionnaire contained 9 questions to determine the backgrounds of the respondents (e.g., educational level, age, previous training in the use of computers, years of teaching experience, etc.). Six (6) questions focued on how computers were integrated into the curriculum. For these questions, the respondents were asked to fill in the curriculum areas in which they and their students used computers and then to check several alternatives on how computers were used in the curriclum areas (e.g., instructional methods, student use, where students use computers, frequency of computer use). One (1) question inquired about the use of assistive technology (e.g., speech card, touch window, expanded keyboard, etc.) The respondents were also asked to list the names of software programs that they were using and which they preferred.

The SPSS-X (1983) statistical software package was used to analyze the data.

Procedure

The final questionnaire was mailed to the 700 special educators with a cover letter requesting participation in this study. A stamped self-addressed

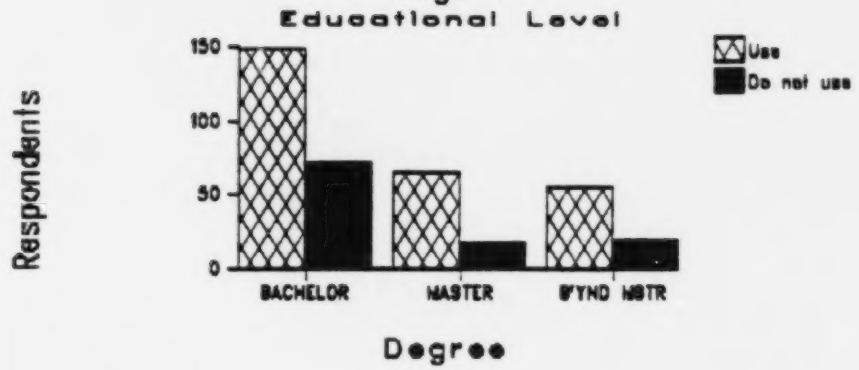
envelope was enclosed. As an incentive, respondents who returned completed questionnaires were offered a guide to the selection of software. Three weeks after the initial mailing, a follow-up letter and an additional questionnaire were mailed to non-respondents.

Results

A total of 381 (54.4%) of the respondents returned useable questionnaires. Two hundred and seventy (270) teachers, or 29.5% of the total sample, reported that they did use computers. One hundred and eleven (111) teachers, or 15.8% of the total sample, reported that they did not use computers.

Of the respondents who used computers, 55.2% (n=149) had bachelor's degrees, 24.1% (n=65) had master's degrees, and 20.0% (n=55) had coursework and/or a degree beyond the master's level. The educational level of 1 of the computer users was unknown. Of the respondents who reported that they did not use computers, 64.9% (n=72) had bachelor's degrees, 16.2% (n=18) had master's degrees, and 18.0% (n=20) had coursework and/or a degree beyond the master's level. The educational level of 1 of the non-computer users was known (Figure 1).

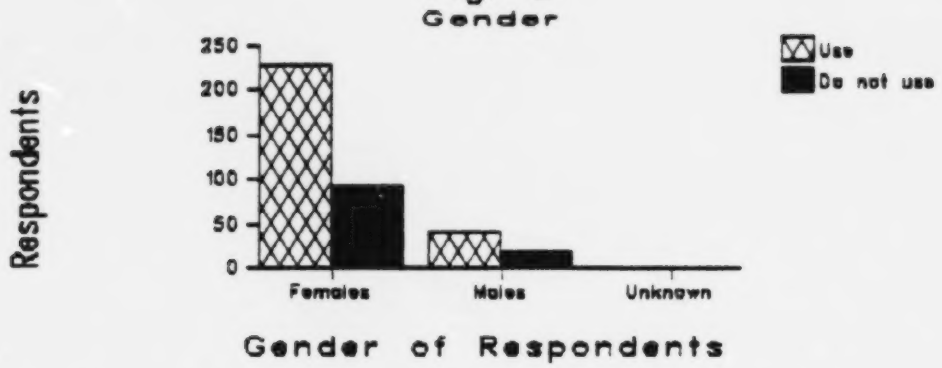
Fig. 1



In order to determine whether there was a significant difference in educational level between the respondents who used computers and those who did not, a chi square analysis was performed. The results showed that there were no significant differences.

Of the respondents who used computers, 84.4% (n=228) were females; 15.6% (n=42) were males. Regarding the respondents who did not use computers, 82.9% (n=92) were females; 16.2% (n=18) were males. The gender of 1 of the non-computer users was unknown (Figure 2).

Fig. 2

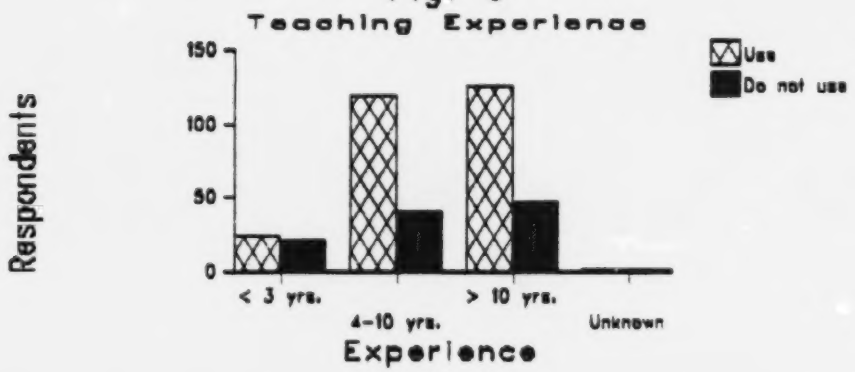


The age ranges of the teachers who used computers were: 69.2% (n=187) were younger than 40 years old; 30.4% (n=82) were older than 41 years old. The age ranges for the teachers who did not use computers were: 64.9% (n=72) were younger than 40 years old; 34.2% (n=38) were older than 41 years old. There were no significant differences in age between younger and older computer users and non computer users.

Regarding the years of teaching experience of the teachers who used computers, 9.3% (n=25) has less than 3 years of experience; 44.1% (n=119) had between 4 and 10 years of experience; and, 46.3% (n=125) had more than 10 years of experience. The teaching experience of 1 of the computer users was unknown. Of the teachers who did not use computers, 19.8% (n=22) had less than 3 years of

experience; 36.9% (n=41) had between 4 and 10 years of experience; and, 42.3% (n=47) had more than 10 years of experience (Figure 3). The teaching experience of 1 of the non-computer users was unknown. There were no significant differences in the years of experience between the teachers who used computers and the teachers who did not use computers.

Fig. 3



Both teachers who used computers and those who did not reported that they had nad some form of previous training in the use of computers (Table 1). Among both groups, in-service training and self taught methods were the most common. There were no significant differences between the computer users and the non-users with regard to previous training.

Table 1

Previous Training in the Use of Computers

	users		non-users	
	n	%	n	%
In-service	157	58.1	40	36.0
University training	60	22.2	27	24.3
Adult/community courses	42	15.6	13	11.7
Local consultant	49	18.1	5	4.5
Workshop	50	18.5	12	10.8
Self-taught	162	60.0	39	35.1
Other	35	13.0	17	15.3

N = 270 (% = more than 100%, as more than one response was allowed)

The greatest impediments to using computers, for both computer users and non-users were lack of computers, lack of software, and lack of training (Table 2). The teachers who used computers were asked to rank order the acitivites that were most helpful to them. Activities that were rated as most.helpful were the local support person and in-service training; least helpful were journal/magazine articles.

Table 2

Greatest Impediment in Using Computers

	Computer Users		Non-users	
	n	%	n	%
Not interested	2	.7	2	1.8
Lack of training	46	17.0	25	22.5
Lack of computers	85	31.5	53	47.4
Lack of software	57	21.1	5	4.5
Insuff. admin. support	0.0	0.0	4	3.6
Other	31	11.5	14	12.6

Several questions asked how computers were used by teachers and students. These results are reported in the tables that follow.

Question 10: In each of the blanks (A,B,C,D) below, please fill in the curriculum areas in which you use computers. Next, check the instructional methods you use (a,b,c,d,e) in each curriculum area.

Instructional Methods Used With Computers in Subject Areas*

	Reading n / %	Math n / %	Science n / %
Teacher directed	97 / 35.9	119/ 44.1	18/6.7
Reward	103/ 38.1	151/ 55.9	13 / 4.8
Practice	135/ 50.0	213/ 78.9	17 / 6.3
Tutorial	85 / 31.5	144/ 53.3	20 / 7.4
Specialized use	47 / 17.4	55 / 20.4	21 / 7.8

	Social studies n / %	Language arts n / %	English n / %
Teacher directed	34 / 12.6	34 / 12.6	36 / 13.3
Reward	36 / 13.3	27 / 10.0	26 / 9.6
Practice	39 / 14.4	43 / 15.9	37 / 13.7
Tutorial	29 / 10.7	28 / 10.4	26 / 9.6
Specialized use	31 / 11.5	38 / 14.4	40 / 14.8

Instructional Methods Used With Computers in Subject Areas* (con'd)

	Spelling n / %	Writing n / %	Grammar n / %
Teacher directed	16 / 5.9	24 / 8.9	2 / .7
Reward	16 / 5.9	17 / 6.3	2 / .7
Practice	41 / 15.2	25 / 9.3	3 / 1.1
Tutorial	19 / 7.0	15 / 5.6	1 / .4
Specialized use	12 / 4.4	32 / 11.9	2 / .7

*The subjects checked more than one response.

Question 11: How do students use the computer?

How Students Use the Computer*

	Reading n / %	Math n / %	Science n / %
Independent	134/ 49.6	203/ 75.2	29 / 10.7
1 on 1 w/ tcher or aide	122/ 45.2	171/ 63.3	24 / 8.9
Small group w/o teacher	48/ 17.8	73 / 27.0	14 / 5.2
With peers	101/ 37.4	158/ 58.5	22 / 8.1

How Students Use the Computer*
(con'd)

	Social studies n / %	Language arts n / %	English n / %
Independent	50/ 18.5	56/ 20.7	54/ 20.0
1 on 1 w/ tcher or aide	43/ 15.9	50/ 18.5	39/ 14.4
Small group w/o teacher	23/ 8.5	19/ 7.0	17/ 6.3
With peers	43/ 15.9	37/ 13.7	32/ 11.9

	Spelling n / %	Writing n / %	Grammar n / %
Independent	40/ 14.8	38/ 14.1	1/ .4
1 on 1 w/ tcher or aide	24/ 8.9	35/ 13.0	2/ .7
Small group w/o teacher	9/ 3.3	11/ 4.1	1/ .4
With peers	24/ 8.9	22/ 8.1	1/ .4

How Students Use the Computer*
(con'd)

	Vocational n / %	Reward n / %	Comp lit n / %
Independent	5/ 1.9	7/ 2.6	11/ 4.1
1 on 1 w/ tcher or aide	8/ 3.0	3/ 1.1	8/ 3.0
Small group w/o teacher	5/ 1.9	1/ .4	1/ .4
With peers	4/ 1.5	7/ 2.6	3/ 1.1

	Miscellaneous use n / %
Independent	34/ 12.6
1 on 1 w/ tcher or aide	30/ 11.1
Small group w/o teacher	13/ 4.8
With peers	29/ 10.7

*The subjects checked more than one response.

Question 12: Where do students use the computer?

Where Students Use Computers*

	Reading		Math		Science	
	n	%	n	%	n	%
In spec class or res room	142	52.6	199	73.7	29	10.7
In lab	22	8.1	30	11.1	6	2.2
In library	17	6.3	18	6.7	8	3.0
In reg class	30	11.1	45	16.7	10	3.7

	Language Arts		English		Spelling	
	n	%	n	%	n	%
In spec class or res room	59	21.9	55	20.4	45	16.7
In lab	14	5.2	11	4.1	2	.7
In library	8	3.0	8	3.0	4	1.5
In reg class	18	6.7	10	3.7	6	2.2

Where Students Use Computers*
(con'd)

	Grammar		Vocational		Rewards	
	n	%	n	%	n	%
In spec class or res room	2	.7	8	3.0	7	2.6
In lab	1	.4	3	1.1	2	.7
In library	0	0.0	0	0.0	0	0.0
In reg class	1	.4	3	1.1	2	.7
	Social Studies		Writing		Comp. Lit.	
	n	%	n	%	n	%
In spec class or res room	50	18.5	37	13.7	10	3.7
In lab	7	2.6	9	3.3	5	1.9
In library	9	3.3	1	.4	1	.4
In reg class	17	6.3	11	4.1	4	1.5

*The subjects checked more than one response.

Question 13: Students use computers

Frequency of Student Use of Computers in Reading

	n	%
Daily	21	7.8
3-4 times per week	40	14.8
1-2 times per week	76	28.1
1-2 times per month	18	6.7
Less than once a month	2	.7
Not at all	112	41.5

Frequency of Student Use of Computers in Math

	n	%
Daily	39	14.4
3-4 times per week	64	23.7
1-2 times per week	98	36.3
1-2 times per month	19	7.0
Less than once a month	2	.7
Not at all	46	17.0

Frequency of Student Use of Computers in Science

	n	%
Daily	0	0
3-4 times per week	6	2.2
1-2 times per week	17	6.3
1-2 times per month	8	3.0
Less than once a month	3	1.1
Not at all	234	86.7

Frequency of Student Use of Computers in Social Studies

	n	%
Daily	2	.7
3-4 times per week	13	4.8
1-2 times per week	32	11.9
1-2 times per month	11	4.1
Less than once a month	2	.7
Not at all	208	77.0

Frequency of Student Use of Computers in Language Arts

	n	%
Daily	15	5.6
3-4 times per week	17	6.3
1-2 times per week	28	10.4
1-2 times per month	6	2.2
Less than once a month	3	1.1
Not at all	200	74.1

Frequency of Student Use of Computers in English

	n	%
Daily	12	4.4
3-4 times per week	17	6.3
1-2 times per week	29	10.7
1-2 times per month	1	.4
less than once a month	2	.7
Not at all	209	77.4

Frequency of Student Use of Computers in Spelling

	n	%
Daily	8	3.0
3-4 times per week	9	3.3
1-2 times per week	24	8.9
1-2 times per month	2	.7
Less than once a month	1	.4
Not at all	225	83.3

Frequency of Student Use of Computers in Writing

	n	%
Daily	7	2.6
3-4 times per week	12	4.4
1-2 times per week	18	6.7
1-2 times per month	6	2.2
Less than once a month	0.0	0.0
Not at all	226	83.7

Frequency of Student Use of Computers in Grammar

	n	%
Daily	1	.4
3-4 times per week	0	0.0
1-2 times per week	1	.4
1-2 times per month	0	0.0
Less than once a month	0	0.0
Not at all	268	99.3

Frequency of Student Use of Computers in Vocational Areas

	n	%
Daily	3	1.1
3-4 times per week	2	.7
1-2 times per week	4	1.5
1-2 times per month	0	0.0
Less than once a month	0	0.0
Not at all	261	96.7

Frequency of Student Use of Computers as a Reward

	n	%
Daily	2	.7
3-4 times per week	2	.7
1-2 times per week	3	1.1
1-2 times per month	1	.4
less than once a month	0	0.0
Not at all	262	97.0

Frequency of Student Use of Computers in Computer Literacy

	n	%
Daily	10	3.7
3-4 times per week	1	.4
1-2 times per week	4	1.5
1-2 times per month	0	0.0
Less than once a month	0	0.0
Not at all	255	94.4

Frequency of Student Use of Computers in Miscellaneous Activities

	n	%
Daily	6	2.2
3-4 times per week	14	5.2
1-2 times per week	14	5.2
1-2 times per month	9	3.3
Less than once a month	1	.4
Not at all	226	83.7

Question 16A: Do your students use the computer as a tool in completing an assignment (such as a word processor to complete a writing assignment or graphics to create a picture or a data base to retrieve information, etc.)?

Student Use of Computers For Completion of Assignments in Reading

	n	%
Never	193	71.5
Occasionally	45	16.7
Sometimes	12	4.4
Frequently	11	4.1

Student Use of Computers For Completion of Assignments in Math

	n	%
Never	204	75.6
Occasionally	37	13.7
Sometimes	9	3.3
Frequently	7	2.6

Student Use of Computers For Completion of Assignments in Science

	n	%
Never	237	87.8
Occasionally	18	6.7
Sometimes	6	2.2
Frequently	6	2.2

Student Use of Computers For Completion of Assignments in Social Studies

	n	%
Never	233	86.3
Occasionally	17	6.3
Sometimes	6	2.2
Frequently	9	3.3

Student Use of Computers For Completion of Assignments in Writing

	n	%
Never	227	84.0
Occasionally	13	4.8
Sometimes	8	3.0
Frequently	19	7.0

Question 16B: Check the following peripherals which you have attached to your computer and those which you actually use.

Availability and Use of Peripherals

	Have		Use	
	n	%	n	%
Speech card	16	5.9	15	5.6
Touch window	6	2.2	6	2.2
Muppet keys	14	5.2	14	5.2
Exp keyboard	17	6.3	15	5.6
Switch	14	5.2	16	5.9
Printer	206	76.3	198	73.3
Modem	7	2.6	7	2.6
Mouse	47	17.4	33	12.2
Joystick	46	17.0	39	14.4
Koala pad	11	4.1	8	3.0
Interact video	1	.4	1	.4
Other	2	.7	3	1.1

One question asked the respondents to list the software they were using in different curriculum areas. This list can be found in Appendix 2.

Discussion

This study investigated how special education teachers and their students use and integrate the use of computers into curriculum areas.

Aside from reading and mathematics, teachers rarely use the computer in other curriculum areas. It was surprising to see that relatively few students used the computer to complete writing, science, social studies, and language arts activities. In addition, it appears that most students do not regularly use the computer to complete assignments or other instructional activities. Rather, the computer is used 1-2 times a week.

Computers are used in very traditional ways by special education teachers. Teachers mainly use the computer for drill and practice, teacher directed activities, and as as reward. Students usually use the computer independently, with a teacher or an aide or with peers to complete these teacher activities. While the majority of teachers reported that the students completed their reading and mathematics assignments in the special classroom or the resource room, relatively few teachers

reported that students complete their work in the regular classroon. The question arises as to what extent resource room or special classroom activities are integrated into the regular classroom. An analysis of these data, leads to the conclusion that, as far as computer related assignments, integration is not occurring.

Some students with special needs are not able to use the standard keyboard to access the computer. Other students need to have a speech synthesizer to assist them in reading text displayed on the screen. These access devices are necessary for these students to use the computer. However, only a few teachers indicated that they currently have these devices.

Computers are not part of the everyday lives of students with special needs. In an increasingly technological society, special education students may be at a disadvantage right from the beginning. Because they use computers in limited ways and for very limited amounts of time, they lack computer literacy skills. Students with special needs, who are already behind and different from their peers, lack the computer skills to help them catch up.

The results of this study suggest that additional questions need to be explored. How can special education teachers integrate the computer into instruction in the special classroom or resource room. How can computers be utilized in adapting instruction for mainstreamed students in the regular classroom?

What types of computer activities promote student achievement? Cosden (1988) wrote that additional studies investigating academic, social, and motivational benefits of using computers need to be conducted. Studies need to be conducted on how computers can be used to increase achievement and how to individualize the use of the computer to the different needs of students (Cosden, 1988).

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Appendix 1

Special Education Computer Questionnaire

Directions: Please complete all the questions as completely as you can. Return the questionnaire in the enclosed stamped, self-addressed envelope by January 31, 1989 to: Software Evaluation Center, Libby G. Cohen/Loraine Spenciner, USM, 407 Bailey Hall, Gorham, ME 04038.

1) Educational Level:

a.___ Bachelor's b.___ Master's c.___ Master's + d.___ Doctorate

2) Previous training in the use of computers (check all that apply):

a.___ in-service
b.___ university training
c.___ adult/community courses
d.___ local consultant
e.___ workshop sponsored by
f.___ self taught
g.___ other (*please specify*) _____
_____

3) Age Range:

a.___ 25 or under b.___ 26-40 c.___ 41-55 d.___ over 56

4) Gender:

a.___ female b.___ male

5) Years of teaching experience:

a.___ 3 or under b.___ 4-10 years c.___ 11-15 years
d.___ 15-20 years e.___ over 21

6) Percentage of exceptional students you teach:

a.___ % LD
b.___ % ED
c.___ % Mild-Moderate MR
d.___ % Severe MR
e.___ % Speech/Language
f.___ % Vision Impaired
g.___ % Hard of Hearing/Deaf
h.___ % Other Health Impaired
i.___ % Gifted

7) Age of students you teach (check all that apply):

a.___ 5-7 years b.___ 8-13 years c.___ 14-16 years d.___ over 16 years

8) Are you presently using computers with students?

a.___ yes b.___ no

9) Rank from 1-6 the greatest impediment in using computers with your students (1 being the greatest impediment):

a.___ I am not interested in computers
b.___ I lack training
c.___ there is a lack of computers
d.___ there is a lack of software
e.___ there is insufficient administrative support
f.___ other *(please specify)* _____

If you are not using computers, PLEASE STOP here and return this questionnaire.
If yes, please continue.

The following questions apply to how you use computers in your classroom. Please answer all questions as completely as possible.

10) In each of the blanks (A,B,C,D) below, please fill in the curriculum areas in which you use computers. Next, check the instructional methods you use (a,b,c,d,e) in each curriculum area.

	Curriculum Area: (e.g., Reading, Mathematics, Science, Social Studies)			
	A. _____	**B.** _____	**C.** _____	**D.** _____
a. teacher directed instruction	1. ____	2. ____	3. ____	4. ____
b. reward	5. ____	6. ____	7. ____	8. ____
c. practice	9. ____	10. ____	11. ____	12. ____
d. tutorial	13. ____	14. ____	15. ____	16. ____
e. specialized use as an aid to instruction (tool software e. g.,word processing, synthesized speech, calculator, information, database, etc.)	17. ____	18. ____	19 ____	20. ____

11) How do students use the computer?

	Curriculum Area: (fill-in)			
	A. _____	**B.** _____	**C.** _____	**D.** _____
a. independently	21. ____	22. ____	23. ____	24. ____
b. one on one with teacher or aide with peers	25. ____	26. ____	27. ____	28. ____
c. small group instruction without teacher or aide	29. ____	30. ____	31. ____	32. ____
d. with peers	33. ____	34. ____	35. ____	36. ____

12) Where do students use the computer?

	Curriculum Area: (fill-in)			
	A. _____	B. _____	C. _____	D. _____
a. in special classroom or resource room	37. ____	38. ____	39. ____	40. ____
b. lab setting	41. ____	42. ____	43. ____	44. ____
c. in library	45. ____	46. ____	47. ____	48. ____
d. in regular classroom	49. ____	50. ____	51. ____	52. ____

13) Students use computers:

	Curriculum Area: (fill-in)			
	A. _____	B. _____	C. _____	D. _____
a. daily	53. ____	54. ____	55. ____	56. ____
b. 3-4 times per week	57. ____	58. ____	59. ____	60. ____
c. 1-2 times a week	61. ____	62. ____	63. ____	64. ____
d. 1-2 times a month	65. ____	66. ____	67. ____	68. ____
e. less than once a month	69. ____	70. ____	71. ____	72. ____

14) Please list the software you are using:

	Curriculum Area: (fill-in)			
	A. _____	B. _____	C. _____	D. _____
Name of Software	73. _____	74. _____	75. _____	76. _____
	77. _____	78. _____	79. _____	80. _____
	81. _____	82. _____	83. _____	84. _____
	85. _____	86. _____	87. _____	88. _____

15) Please place an asterisk by all of the software programs in Question 14 that you most prefer.

16) Do your students use the computer as a tool in completing an assignment (such as a Word Processor to complete a writing assignment or Graphics to create a picture or a Data Base to retrieve information, etc.)?

	Curriculum Area: (fill-in)			
	A. _____	B. _____	C. _____	D. _____
a. never 0%	101. _____	102. _____	103. _____	104. _____
b. occasionally 25%	105. _____	106. _____	107. _____	108. _____
c. sometimes 50%	109. _____	110. _____	111. _____	112. _____
d. frequently	113. _____	114. _____	115. _____	116. _____

16) Check the following peripherals which you have attached to your computer and those which you actually use:

have:	peripheral:	use:	have:	peripheral:	use:
_____	speech card	_____	_____	printer	_____
_____	touch window	_____	_____	modem	_____
_____	Muppet keys	_____	_____	mouse	_____
_____	expanded keyboard	_____	_____	joystick	_____
_____	switch	_____	_____	Koala pad	_____
			_____	interactive video	_____

17) Rank in order, from 1-8, the following items that have been most helpful to you in your computer usage (1 being the most helpful).

a.___ in-service training

b.___ university course work

c.___ adult or community education

d.___ administration support

e.___ journal or magazine articles

f.___ local support person

g.___ workshops (list)_____

h.___ other *(please specify)* _____

THANK YOU FOR HELPING US TO UNDERSTAND THE USE OF COMPUTERS IN MAINE SCHOOLS!

SPECIAL EDUCATION COMPUTER QUESTIONNAIRE

If you would like a copy of the software guide soon to be published by Maine Department of Educational and Cultural Services, Division of Special Education, please indicate below:

NAME _____

ADDRESS _____

_____

_____

(cut here) - - -

Appendix 2

Appendix 2

Software Preferred by Teachers

READING

NOTE: * most preferred
The first number indicates the number of persons who most preferred the software; the second number indicates the total number of persons who listed the software.

A, B, C's in Color (TCE) - 2
Alphabet Circus (DLM) - 1* - 3
Alphabet Soup - 1
Alphabet Zoo - 1
Alpha Build - 1
Alpha Express - 1
AlphaKey - 2
Alpine Skier - 1* - 2
Amazing Reading Machine - 2* - 3
Apple Word Processor - 1
Appleworks - 3* - 15
Applewriter - 2
Application Series - 1* - 1
Aquarius - 1
Bagasaurs - 1
Bake 'n Taste - 1
Bank Street Writer - 4* - 12
Basic Skills Collection (Duncan Institute) - 1* - 3
Behind the Wheel - 1
Best Electronic Wordbook Ever - 1
Capitalization (Hartley) - 1* -1
Cause & Effect - 1* - 1
C.C. Writer - 1
Chariots, Cougars and Kings - 1
Child Writer - 1* - 1
Child's Play - 1* - 1
Clue in on Phonics - 1
Compounds - 1
Context Clues - 1
Contraction Action - 2
Cookie Monster Letters (CCW) - 2
Cotton Tales - 1* - 1
Creative Writer - 2
Crossword Magic - 1
Diagnostic Reading Porgram - 1
Diascriptive Reading - 1

Dilemma - 1
DLM - 2* - 2
Dragon's Keep - 1
Duncan Institute Basic Skills disks - 1
Early Games for Young Children - 1* - 1
Early Reading - 1
Educational Activites - 2* - 2
Fact or Opinion - 1* - 1
First Letter Fun (MECC) - 7
Following Written Directions - 2
Forming Inferences - 1
Friendly Computer - 1* - 2
Fun From A to Z (MECC) - 1* - 6
Gapper - 1
Game Show (Adv. Ideas) - 1* - 3
Gamco Spelling Program - 1
Garfield - 1* - 1
Getting the Main Idea (Apple) - 1* - 2
Getting Ready to Read & Add - 3
Grammar Gremlins (Davidson) - 1* - 1
Hartley - 2
Hartley Phonics - 1
Iggy's Gnees - 1
Image Writer - 1
Inferential Annie (MECC) - 3
Jamestown Courseware - 1* - 1
Job Hunting Skills - 1
Kid Writer - 1* - 4
Kids' Computer Keyboard - 1
King's Quest - 1
Kittens, Dogs, Toads and Kids - 1
Kittens, Kids and a Frog - 5
LER Language Experience - 1
Letter Recognition - 1
Letters and Words - 1
Little Riddles - 1
Magic Puzzle - 1
Magic Slate - 1* - 1
Magic Spells - 1
Make a Match (DLM) - 1
MECC Programs - 2* - 15
MECC Writer (#1600 Algernon) - 1
Media Materials - 1
Memory Building Blocks - 1* - 1
Memory Match (Hartley) - 2
Microzine (Scholastic)- 1* - 7
Millikin Comprehension Power Program - 1
Mindscape (School Days) - 1

Monty Plays Scrabble - 1
Moonlight & Madness - 1
Moptown Programs - 1
Morning Star - 1
Mother Goose - 1
Muppet Learning Keys - 2* - 4
Muppets on Stage - 1
Muppetville - 1* - 3
Newsroom - 1
Not Trivia - 1
Odd One Out - 1
O'Dell Lake - 1
Oh Dear - 1
Oregon Trail - 2* - 7
Paint with Words (MECC) - 3* - 9
Patient Tutor - 1
Phonet - 1
Phonic Identification II - 1
Phonics (MECC) - 2
Phonics, Blends and Digraphs - 2
Phonics Prime Time Series (MECC) - 1* - 5
Picture Phonics - 1
Pop 'n Spell - 1
Prefix Sense - 1
Prefixes and Suffixes - 2
Pre Reading (MECC) - 2
Prime Time Conjunctions - 1
Print Shop (Broderbund) - 2* - 6
Punctuation Series - 1
Rainbow - 1
Random House - 1
Read 'n Roll - 1* - 1
Reader Rabbit - 1* - 9
Reading Comprehension II - 2
Reading Fun - 1
Reading Flight - 1
Reading On - 1
Reading Power - 1
Reading Roundup - 1
Same or Different - 1
Scholastic - 1
Science Island (Grolier) - 1* - 1
School Days - 1
Sight Words 1&2 - 2
SLED - 1
Snoopy Writer - 1
Speed Reader (Apple) - 2
Sell It! (Davidson) - 1* - 1

Spellerator - 1
Spellicopter (Master Spell) - 1
Spinnaker - 1
Starburst - 1
Sticky Bears (Sunburst) - 6
Sticky Bear Comprehension - 1* - 2
Sticky Bear Opposites - 1
Sticky Bear Reading - 1* - 5
Story Book - 1
Story Machine - 1
Story Tree - 1
Success with Reading - 1* - 1
Suffix Sense - 1
Sunburst Communication - 1* - 3
Super Speller - 1
Teacher Made - 2
That's My Job - 1
The Tic Tac Show (Adv. Ideas) - 2
Those Amazing Reading Machines (MECC) - 3
Time Capsule - 1* - 1
Tiger's Tales - 1* - 1
Top Readers Club - 1* - 2
Touch 'n Write - 2
Type to Learn - 1
Vocational Challenge (Mindscape) - 1
Ways to Read Words (Queue) -1* -1
Weekly Reader - 1
Where in the World is Carmen Sandiego? (Broderbund) - 3
U.S.A. - 2
Who, What, Where, When, & Why - 1* - 1
WizWorks (DLM) - 1
Wizard of Words (Advanced Ideas) - 2* - 2
Word Attack! (Davidson) - 1* - 1
Word Bank - 1
Word Herd - 1
Word Ladders - 1
Word Magic - 1
Word Muncher (MECC) - 1* - 11
Word Radar - 1
Word Rally - 1
Word Wizard (MECC) - 2* - 7
Word-a-Tach - 1
Words at Work (MECC) - 4
Working with the Alphabet - 1
Writer Rabbit - 1* - 1
Writing a Narrative (MECC) - 1

MATH

Addison-Wesley - 1
Addition & Subtraction 1&2 - 1
Addition Logician - 2
Algebra Adventure - 1
Algebra Shop - 1* - 2
All About Time - 1
All About Money - 1
Alligator Mix (DLM) - 3
Animal Farm (DLM) - 1* - 1
Apple Barrel - 1
Appleworks - 2* - 4
Aquarious Instructional - 1
The Arithmetic Classroom - 1
Arithmetic Critters (MECC)- 3* - 7
Auto Math 1,2 (MECC) - 1
Bake & Taste - 1
Balancing Bears - 1
Bas Math - 1
Basic Math - Comprehension Skill Building - 2
Basic Skills Collection (Duncan Institute) - 1* - 6
The Bears Tell Time - 1
Better Math Skills - 1
Bomb - 1
Borrow Time (B-5 Software) - 1
Brain Crane - 1
Building Math Skills (Random House) - 1* - 1
Calendar - 1* - 1
CBS Success with Math - 1
Challenge Math - 1* - 7
Change Maker - 1
Charles Lund - 1* -1
Charlie Brown's 1, 2, 3 - 1
Checkbook - 1* - 1
Chessmaster 2000 - 1* - 1
Circus Math - 2* - 10
Clock (Hartley) - 4* - 6
Clocks - Telling Time - 1
Clockworks (MECC) - 4* - 14
Code Quest (sunburst) - 1
Color Math (b-5 Software) - 3
Computer Math Activities - 1
Conquering Whole Numbers - 2* - 2
Counting Critters (MECC)- 2* - 6
Counting - 1
Counting Parade (Spinnaker) - 1

Cross - 1
Decimal Concepts - 3
Decimals (EduWare) - 1
Decimals (Microcomputer Workshop) - 2
Demolition Division - 1
Design Ware - 1
Digitosaurus - 1
Division - 3
Division Quest - 1
DLM Software - 2* - 4
Dr. O2 - 1
Dragon Mix - 3
Drills of All Kinds - 1* - 1
Duncan Institute Basic Skills Disks - 2
Early Addition - 1
Early Games - 1
Educational Activities - 1
Elementary Math Package I (Micro Learning Ware) - 1
Estimation - 1
Exploring Metros - 1
Exploring Tables & Graphs I&2 - 1
Factory - 1* - 1
Facts on Geometry - 1
Fast Math (NTS) - 1* - 1
Figure Fun - Metrics - 1* - 1
Figure Fun - Speed Drills - 1
Fish Scales (DLM) - 1
Fishing for Answers - 1
Flashcards - 1
The Flying Carpet - 1
Fractions (Eduware) - 1* - 2
Fractions (Gamco) - 1* - 1
Fraction Concepts - 5
Fration Fever - 1
Fraction Fuel-Up - 1
Fraction Machine (Southwest Ed Psych Services) - 1* - 1
Fraction Munchers - 1* - 3
Froggy's Math Race - 1
Funnells (A+ Catalog) - 1* - 1
Galaxy Math - 3
Gamco - Add., Sub., Mult., Div. - 2
Games and Fractions - 1
Get to the Point (Sunburst) - 1
Getting Ready to Read & Add - 2
Going Dotty - 1
Grover's Number Rover - 1
Guess the Numbers - 1
Hartley - 1

Hey Taxi - 1
Hot Dog Stand - 1* - 1
How the West Was One + Three x Four - 2
Incredible Lab - 1
Intergers - 1
Introduction to Division - 1* - 1
It's About Time - 1
Kid's Corner - 1
Kids In Between - 1
Kinder Comp - 1
Kings Rule - 1* - 2
Knowing Numbers - 1
Ladder Multiplication - 1
Lazer Math - 1
Learning to Add & Subtract - 1* - 1
Lemonade Stand - 2
Let's Count - 1
Let's Go Fishin' - 1
Logo - 1
Long Division (Gamco) - 1
Make-a-Match - 1
Marketplace - 1* - 5
Mastery Arithmetic Games (Apple) - 1* - 3
Mastering Basic Math (Opus) - 1* - 1
Mastery Math Series (MECC) - 2* - 2
Math Ani-Mall - 1
Math Baseball -1
Math Blaster (MECC) - 14* - 36
Math Concepts (Hartley) - 2
Math Drills - 3
Math Facts (B-5 Software) - 2
Math For Everyday Living (Educational Activites) - 1
Math Football - 2
Math Fun - 1* - 1
Math Invader - 2
Math Magic - 1
Math Man - 1* - 1
Math Munchers - 1
Math in a Nutshell - 1
Math Problem Solving (McGraw-Hill) - 1* - 2
Math Quiz - 1
Math Rabbit - 1* - 3
Math Review - Drills - 1* - 1
Math Sequences (Millikin) - 2
Math Shop - 4
Math Skill Games - 1* - 1
Math Tutor (Scholastic) - 2
Math Word Problems - 1* - 2

Mathasaurus (MECC) - 1* - 3
McMillan - 1
MECC - 8* - 28
Menu-Math (Hartley) - 1
Merrill Math - 1
Meteor Math - 1
Meteor Multiplication (DLM) - 2* - 5
Millikin Math Series - 1* - 4
Millikin Skillbuildres - 1
Mind Puzzles - 1
Mindscape - 2
Minus Mission - 1
Mixed Numbers (Milton-Bradley) - 2
Money (B-5 Software) - 1* - 5
Money Manager - 1* - 1
Money! Money! (Hartley) - 1* - 6
Money Sense - 1
Moneyworks - 1* - 8
Moptown Programs - 2
Morning Star - 3
Mousepaint - 1
Multiplication 1&2 - 1
Multiplication Games - 1* - 1
Multiplication Mission - 1
Multiplication Practice - 1
Multiplication Puzzles (MECC) - 5
Multiploy (MicroMedia) - 1* - 2
Muppet Learning Keys - 1
Muppets on Stage - 1
Muppetville - 1* - 1
Nimble Number Facts - 1
Number Farm (DLM) - 4
Number Magic - 1
Number Munchers - 5* - 16
Number Sea Hunt - 1
Odd One Out - 1* - 1
Orange Cherry Software - 1
Path Tactics - 2* - 8
Patterns - 1
Percents - 1
Piece of Cake - 1
Pizza Fractions - 1* - 1
Playing to Learn - 1* - 1
Police Subtract - 1
The Pond (Sunburst) - 1
Pre-Counting - 1
Prescription Drill (Hartley) - 1
Printshop - 1* - 2

Problem Solving (McGraw-Hill) - 2
Problem Solving Strategies - 1
Purchase Power (Math. Life Skills) - 1
Putting Together - Take Away - 1* - 1
Puzzle Tasks - 1
Pyramid Puzzle - 1
Quickflash - 1
Quotient Quest - 1
Race Car Arithmetic - 1
Regrouping Memory (1st Step) - 1
Roce-Cave Math - 1
Safari Search - 1
Salina Math Games (Sunburst) - 2* - 2
Seatwork (SRA) - 1* - 1
Shell Game - 1
Skills in Math (Hartley) - 1
Slam Dunk & Fractions - 1* - 1
Soft Text Math (Continental) - 1
Space Math - 1
Space Subtraction - 7
Space Waste Race - 1
Speed Drill - 1
Speedscript - 1
Speedway Math - 3* - 17
Starburst - 1
Sticky Bears - 2* - 16
Street Map - 1
Subtraction, Addition, Fractions - 1
Subtraction Puzzles - 1
Success with Math (CBS) - 1
Survival Math (Sunburst) - 3* - 11
Super Math - 4
Super Store - 1
T-Clock - 1
Talking Textwriter - 1
Tax Man - 1
TCE Programs - 1
Teacher Made - 1* - 2
Telling Time Computer Set (Gamco) - 2
Ten Little Robots - 2
Tom Mix Math Drill - 1
TRS 80 Network - 1
Two-Step Word Problems - 1
World of Work (Math Life Skills) - 1

ENGLISH

Alpine Skier - 1
Apple Word processor - 1
Appleworks - 7* - 20
Applewriter - 1
Bank Street Writer - 8* - 13
Banner Boss - 1
Basic Skills (Duncan Institute) - 1
Buying What You Need - 1
Calendars - 1* - 1
Capitalization (Hartley) - 1
Child Writer - 1* - 1
Colorscriptsit - 1
Communication (Sunburst) - 1
Compounds - 1
Crossword Magic - 2
Crosswords - 1
Davidson - 1
DLM - 1
Duncan Institute - Basic Skills
English Parts of Speech - 1
Fred Writer - 1* - 2
Game Show - 1
Ghost Writer - 1
Hangword/Scrabble - 1
Holt - 1
Homonyms - 1
I Can Write! - 1
Keyboard Skills - 1
Keyboarding Klass - 1* - 1
Learn to Type - 1
Life Skills English - 1
MacPlus Word Processor - 1
Magic Slate - 1
MECC - 2
MECC Writer - 4
Memory Castle - 1
Micropaws Keyboarding - 1* - 1
Microzine - 1
Mind Castles - 1* - 1
Multi-Mate - 1* - 1
Multiscribes - 18 - 3
Newsroom - 1* - 1
Parts of Speech - 1
Pop 'n Spell - 1
Prefixes and Suffixes - 2

Pre-Write - 1
Print Shop - 2* - 6
Print Shop Companion - 1
Punctuation and Capitilization - 1
Punctuation Series - 1
Read 'n Roll - 1
Readmaster - 1
Roots and Affixes - 1* - 1
Scholastic - 1
Softdisk (TM) - 1* - 1
Speed Reading - 1
Speedscript - 1
Spell It - 1* - 1
Spellevator - 1
Spelling - 1
Sticky Bear - 1
Switch Board - 1
Talkwriter - 1
Term Paper Writer - 1
Those Amazing Reading Machines - 1
Tic Tac Show - 1
Typing for Practice - 1
Typing Tutor - 1* - 1
Writing Workshop (Milliken) - 1
Word Invasion (DLM) - 1* - 2
Word Perfect - 1* - 1
Words at Work - Contractions - 2

LANGUAGE ARTS

Ace Writer - 1
Alphabetta - 1
Amiga - 1
Apple Word Processor - 1
Appleworks - 6* - 23
Applewriter - 1* - 1
B-5 Software - 1
Bank Street Writer - 1* - 11
Basic Skills Collection - 1
Be a Writer - 1
Behind the Wheel - 1
Bird's Eye View - 1
Calendar (Hartley) - 1
Capitalization - 1
Comic Strip Writer - 1
Crossaord Magic - 1
Dinosaur Daze - 1
DLM - 1* - 1

Electronic Writing Lab - 1
End Punctuation - 1
First Words (Laureate) - 1
Fractions - 1
Fred Writer - 2
Friendly Computer - 1* - 2
Ghost Writer - 1
Gree or Not Gree - 1
Hangman - 1
Hartley - 1
I Can Write - 1
Keyboarding - 1
Kid Writer (MECC) - 1* - 4
Kidwriter (Spinnaker) - 1
Language Arts Series II - 2
Language Experience Software - 1* - 1
Learning Wells - 1* - 1
Mac Write Works - 1
Mad Libs - 1* - 1
Magic Slate - 4
MECC - 1* - 7
MECC Language, Vol. 5 - 1
MECC Spelling - 1
Memory Math (Hartley) - 1
Microzine, Jr. - 1
Mind Play (Apple) - 1
Missing Links - 1
Money Machine - 1
More MacPaint - 1
Morning Star - 1* - 1
Multiscribe - 1* - 3
Mystery Objects - 1* - 1
Newsroom - 3
Paws Typing - 2
Phonics/Prime Time - 1
Printmaster - 1
Print Shop - 1* - 7
Publish It - 1
Punctuation Put-On (Sunburst) - 2
Quick Flash - 1
Random House Dictionary - 1
Reader Rabbit (Learning Co.) - 1
Reading What's Different - 1
Remedia-Analogies - 1* - 1
Reward - 1
Right Of Way - 1
Safety First - 1* - 1
SAT - 1

Scrip/Set - 1
Scriptit - 1
Simon Says - 1
Snerd - 1
Sound Tracks - 1
Spell Check - 1
Spell It - 1
Spell Grabber - 1* - 1
Spellbuilder - 1
Spellevator - 1
Spellicoptor - 2
Sticky Bear - 3
Story Machine - 1
Story Tree - 1
Survival Wordplay - 1
Tip 'n Flip - 1
TRS 80 Word Processor - 1
Type to Learn - 1* - 3
Typing Tutor - 1* - 1
Wally's Word Works - 3
What Comes First? - 1
What's in a Frame? - 1
Wheel of Fortune - 1
Who, Where, What, When, Why? (Hartley) - 1
Word Attack (Apple) - 2
Word Families - 1
Word Herd - 1
Word Magic - 1
Word Master (DLM) - 1
Word Munchers - 2
Word Wizards - 1* - 1
Write with Me - 1
Writer Rabbit - 1
Writing Adventure - 2

SCIENCE

Appleworks - 1* - 5
Bank St. School Filer - 1
Body Transparent - 1
Creativity Unlimited - 1
Designasaurus - 1
Dinosaur Dig - 1* - 1
Endangered Species (Database) - 1
Energy House - 1
HRM - 1
Life Science (G & S Software) - 2

MCE - 1
MECC - 1* - 4
MECC Writer - 1
Missing Links - 1
Multiscribe - 1
O'Dell Lake - 1* - 2
Oh Deer - 1
Operation Frog - 1
Pets Unlimited - 1* - 1
Planetary construction Set - 1
The Pond - 1
Print Shop - 1
Science - Space - 1
Science Island - 2
Senses - 1
64 Speedscript - 1
Sky Lab - 1* - 1
Tales of future - 1
Teacher-made - 3
Testgen (Addison/Wesley) - 1
Tic Tac Show - 1
Timelines - 1
TRS 80 Word Processor - 1
Where in the World Is Carmen Santiago? - 1* - 1
Word Wizard - 1

SOCIAL STUDIES

Alphabet Circus (DLM) - 1
Amiga - 1
Ancient Civilizations and the Middle Ages - 1
Animal Photo Fun (DLM) - 1
Applesoft Basic - 1* - 1
Apple's The Writer - 1
Appleworks - 3* - 8
Aquarius Instructional - 1
Bank St. School filer - 1
Bank St. Writer - 1* - 2
Basic Skills Collection (Duncan Institute) - 1* - 1
Birds (MECC) - 1* - 1
Colonial Times (Database) - 1
Cross Country USA - 1* - 2
Davidson - 1
Decisions History - 1
Duncan Institute - 1
The Explorers - 1
E-Z Learner - 1

Fifty States (MECC) - 1
Follet Library Co. - 1
The Game Show - 1
Games of the States (Media Materials) - 1
Holt text - practice disk - 1
Immigrants - 1
Indians (MECC) - 1* - 1
Jenny's Journey - 1* - 3
Logo - 2* - 2
Magic Slate - 1
Maine Studies - 1
Maine to California - 1
Maps Language 1 & 2 - 1* - 1
Market Place - 1
MECC - 3* - 8
Memory Castle - 1* - 1
Micropaws Keyboarding - 1* - 1
Microzines - 1
Missing Links - 1
Multiscribe - 1
National Inspirer - 1
Newsroom - 1* - 1
O'Dell Lake (MECC) - 1* - 1
Oregon Trail (MECC) - 6* - 9
Peterson's - 1
The Presidents (MECC) - 1
Print Shop - 2* - 4
Sea Voyages - 1
Seasons (MECC) - 1* - 1
64 Speedscript - 1
SleD - 1
Snooper Troups - 1* - 1
Solutions - 1
Speedscript - 1
States & Traits - 1
Survival - 1* - 1
Tales of History - 1
Talking Textwriter - 1* - 1
Teacher made - 1
Tic Tac Show - 2
Timelines - 1
Time News Quest - 1* - 1
Town Meeting - 1
US Atlas Action (DLM) - 3
US Constitution - 1
Wheel of Fortune - States & Capitals - 1* - 1
Where is Carmen Santiago series - 4* - 14
Word Wizard - 1

World Atlas Action (DLM) - 4

MISCELLANEOUS

Art
Dazzle Draw - 1* - 1
Dazzle Eyes - 1
Koala - 1
Logo - 1* - 1

Cause & Effect
Adapted Frog & Fly - 1
Cause & Effect 1 & 2 - 1
Four Corners - 2
Master Blaster - 2
Matching - Early Learning - 1
Switch & See - 1
Switches - 1
Wheelchair, Blocks & Fireworks - 2

Directionality/Motor
Draw (Early Games) - 1
Ducks Ahoy - 1
Early Learning Friends - 1* - 1

Following Directions
Fun with Directions - 1
Memory Match - 1

Gifted/Talented
Appleworks - 1* - 1
Bank St. Writer - 1
Blockers & Finders - 1* - 1
Bumble Plot - 1* - 1
Desk Mate - 1
Dinosaur Dig - 1
Logo - 1* - 1
Memory Building Blocks - 1
MS-DOS Basic - 1
Multi Scribe - 1
Oregon Trail - 1* - 1
Poetry Express - 1
The Pond - 1* - 1
Print Shop - 1
Publish It - 1* - 1
Space Waste Race - 1
Tiger's Tale - 1

Zoyon Patrol - 1
Leisure Skills
Early Learning Switches - 1
Matching - 1
Switch Access Music - 1
Switch & See - 1
Switch Music - 1

Memory
Animal Hotel - 1* - 1
Layer Cake - 1
Memory Building Blocks (Sunburst) - 1* - 1
Memeory Match - 1* - 1
Memory: The First Step (Sunbursy) - 1
Mix & Match - 1
Now You See It (Sunburst) -
Simon Says - 1
What's in a Frame? - 1

Music
Public Domain - Music 1 & 2 - 1

Problem Solving
The Factory (Sunburst) - 1* - 1
Logo - 1
Ten Clues - 1

Readiness
ABC - 1* - 1
Bank St. Writer Plus - 1* - 1
Big Bird - 1
Face Maker - 1
Gettin Ready to Read & Add - 1
Juggler's Rainbow - 1
Letter Recognition (Hartley) - 1
Muppet Learning Keys - 2
Muppetville - 1
Odd One Out - 1
Shape Star Ship - 1
Space Waste Race - 1
Sticky Bears - 1
Sticky Bear ABC - 1* - 1
Sticky Bear Numbers - 1* - 1
Touch & Match - 1
Speech/Language
Choices - 1
Early Games for Young Children (Springboard) - 1* - 1
Lucky's Magic Hat (Advanced Ideas) - 1* - 1

Memory Building Blocks - 1
Muppetville - 1
Peak & Speak - 1
Pictalk (Echo II) - 1
Talking Muppet Board - 1
Verb Viper (DLM) - 1* - 1
Weekly Reader Software - 1* - 1
Word Man (DLM) - 1* - 1

Study Skills
Apple Writer - 1
Effective Study Skills - 1* - 1
Fred Writer 1* - 1
MCE programs - 1
Multi-scribe - 1
Print Shop - 1

Visual/Motor
Face Maker - 1
Factory - 1
Graph Master - 1
Jenny's Journey - 1
Logo - 1
Patterns (MECC) - 1
PAWS - Type - 1
Peanuts Picture Puzzle - 1* - 1
Peanuts Maze Marathon - 1
Right of Way (MECC) - 1* - 1
Sticky Bears Town - 1
Teddy's Playground - 1
Window Ware Master Touch - 1* - 1
Other
Appleworks - 1* - 3
Aquarius Instructional Work Series - 1* - 1
Crossword Magic - 1
DOS - 1
Driver Ed (MECC) - 1
Figure Fun - 1* - 1
Improving SAT Scores - 1
Koala Pad - 1* - 1
Learning Well - 1* - 1
Light on Target - 2
MECC - 3* - 13
Mind Puzzles (MECC) - 1* - 1
Printshop - 1* - 2
SOC (AGS) - 1* - 1
Sunburst - 1* - 2
Talking Textwriter - 1* - 1

Teacher made - 2
Test Taking (MCE) - 1* - 1
Word Attack - 1
Word Perfect - 1* - 1
Work Survival Skills - 1